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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,596	11/28/2003	David D. Bohn	003797.00770	8281

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/722,596

Applicant(s)

BOHN ET AL.

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/28/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-8, 11-24, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (Pub. No. US 2004/0189604) in view of Liu (Patent No. 6,133,907).

Regarding claim 1, Lee teaches a computer input device (10, fig. 2) comprising:

a housing (11) having an outer wall (30); and

an image system (20, 21) substantially contained within the housing (11) and configured to display an image (70, fig. 7 and 9) on the outer wall (30) [0026-0027 and 0033].

Lee differs from claim 1 in that he does not specifically teach image system is an projection image system.

Liu teaches an projection image system substantially contained within the housing and configured to display an image (fig. 2, col. 2, lines 22-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the projection image system as taught by Liu in the system of Lee in order to provide an input device with different purposes, for example, for advertisements or purposes of fashion.

Regarding claims 2 and 11, Lee teaches the computer input device is a mouse (fig. 2).

Regarding claim 3, the combination of Lee and Liu teaches the image projection system

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includes a light source (24, fig. 2), a light blocker (23) having a light transmissive portion (230) and a light blocking portion (shown in 23), and a lens (16) (col. 2, lines 22-40).

Regarding claim 5, the combination of Lee and Liu teaches the light blocker (23) is optically located between the light source (24) and the lens (16) (fig. 2 of Liu).

Regarding claim 6, the combination of Lee and Liu teaches the lens creates a focal point for the displayed image located substantially on the outer wall (col. 2, lines 22-40 of Liu).

Regarding claims 7 and 8, the combination of Lee and Liu teaches a light blocker and optics configured to enable the introduction of collimated light to the light blocker (col. 2, lines 22-40 of Liu).

Regarding claims 12 and 28, the combination of Lee and Liu teaches the image projection system includes a laser (col. 2, lines 22-40 of Liu).

Regarding claim 13, the combination of Lee and Liu teaches multiple predetermined image forming devices (230) disposed within the housing, each image forming device producing a different displayed image (col. 2, lines 22-40 of Liu).

Regarding claims 14-16 and 29, the combination of Lee and Liu teaches a device (21, fig. 2) for moving the image forming devices relative to an optical path (col. 2, lines 22-40 of Liu).

Regarding claim 17, the combination of Lee and Liu teaches the computer input device is a pointing device (col. 2, lines 6-7 of Liu).

Regarding claim 18, Lee teaches computer input device includes a motion detecting system (i.e., LED for checking movement of the computer mouse) [0026-0027].

Regarding claim 19, Lee teaches the outer wall is translucent [0028].

Regarding claim 20, Lee teaches the outer wall includes inner and outer surfaces, with the inner surfaces facing an interior of the computer input device and the outer surface facing an exterior of the computer input device [0028].

Regarding claims 21-23, Lee teaches the outer wall includes a top portion, a right side portion, and left side portion, and a rear portion, wherein the image projecting system is configured to display an image on the rear portion (figs. 7 and 9). Although Lee does not specifically teaches to display an image on one of the right side portion and the left side portion or on the top portion. However, this is matter of designer's choice to display image on different positions in order to fit to different purposes.

Regarding claim 24, Lee teaches a computer mouse (10, fig. 2) comprising:  
a housing (11) having an outer wall (30);  
a plurality of actuators (12);  
a motion detecting system (i.e., optical mouse with LED as a light source) for determining relative movement of the mouse; and  
an optical system (20 and 21) including a light source configured to project an image onto the outer wall [0026-0027 and 0033].

Lee differs from claim 24 in that he does not specifically teach the optical system is an optical projection system a movable image forming element located within the housing.

Liu teaches is an optical projection system a movable image forming element located within the housing (fig. 2, col. 2, lines 22-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the projection image

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system as taught by Liu in the system of Lee in order to provide an input device with different purposes, for example, for advertisements or purposes of fashion.

3. Claims 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (Patent No. 6,133,907) in view of Lee (Pub. No. US 2004/0189604).

Regarding claim 30, Liu teaches a method of notifying a user of an occurrence via a computer input device configured to project images, the method including the steps of: projecting a first image; and upon a predetermined condition associated with a computer program, projecting a second image, different from the first image (fig. 2, col. 2, lines 22-40).

Liu differs from claim 30 in that he does not specifically teach displaying the image onto a wall surface of the computer input device.

Lee teaches displaying the image onto a wall surface of the computer input device [0026-0027 and 0033]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the displaying the image onto a wall surface of the computer input device as taught by Lee in the system of Liu in order to present to user easily.

Regarding claims 31-33, Liu teaches projecting non-alphanumeric images (col. 2, lines 22-40). It is a matter of designer's choice to project different images for different purposes.

4. Claims 4, 9, 10, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (Pub. No. US 2004/0189604) in view of Liu (Patent No. 6,133,907) and further in view of Wu (Patent No. 6,882,331).

Regarding of claims 9, 10, and 27, the combination of Lee and Liu differs from claims 9, 10, and 27 in that it does not specifically teach the image projecting system includes an active LED matrix is configured to display alphanumeric data.

Wu teaches an image projecting system includes an active LED matrix is configured to display alphanumeric data (col. 2, lines 40-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the LED matrix as taught by Wu in the system of the combination of Lee and Liu in order to provide a projecting system with low energy consumption.

Regarding claims 4, 25 and 26, the combination of Lee, Liu, and Wu teaches the optical projection system includes an LED (505), a mirrored surface (13), and optics (152) (fig. 22).

5. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure: US 5,057,827 and US 6,945,725.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jennifer Nguyen  
8/31/06

A handwritten signature in black ink, appearing to read 'R. Hjerpe', with a stylized, cursive script.

**RICHARD HJERPE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**